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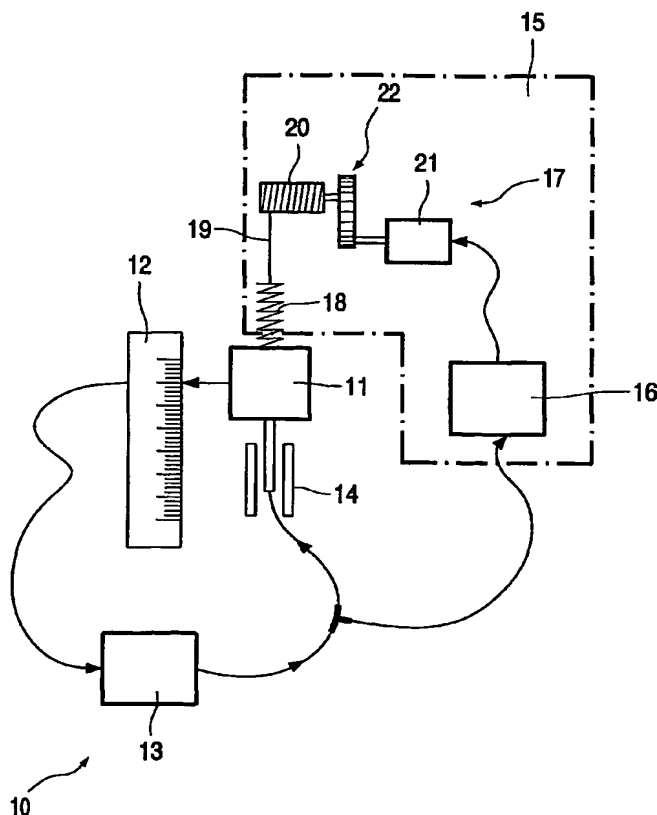
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(54) Title: POSITIONING APPARATUS, GRAVITY COMPENSATION DEVICE AND METHOD FOR COMPENSATING GRAVITATIONAL FORCES



(57) Abstract: The present invention relates to a positioning apparatus. The positioning apparatus comprises at least one position sensor, at least one position controller and at least one position actuator, wherein the or each position sensor measures the position of a position-controlled device, wherein the or each position controller uses measurement signals provided by the or each position sensor as input signals, and wherein output signals generated by the or each position controller are used by the or each position actuator to control the position of said position-controlled device. The positioning apparatus further comprising gravity compensation means compensating gravitational forces acting on said position-controlled device, wherein the gravity compensation means comprises at least one gravity compensation controller and at least one gravity compensation actuator, wherein the or each gravity compensation controller uses the output signals generated by the or each position controller as input signals, thereby generating output signals used by the or each gravity compensation actuator to compensate gravitational forces acting on said position-controlled device.

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